WHAT IS CLAIMED IS:

1. (ONCE AMENDED) A mobile station, for use in a CDMA communications network, [~~including~~] comprising:

a wanted signal processing [~~means for~~] portion which [~~processing~~] processes an input signal, representing a CDMA transmission signal received at the mobile station from a base station of the network, to derive therefrom a wanted signal embodying a preselected spreading code;

a code information receiving [~~means for~~] portion which [~~receiving~~] receives from the base station code information identifying a further spreading code assigned by the network to an interfering signal of another network user; and

an interfering signal processing [~~means for~~] portion which [~~employing~~] employs the further spreading code identified by the received code information to reduce the interference effect of that interfering signal on the derived wanted signal.

2. (ONCE AMENDED) A mobile station as claimed in claim 1, wherein:

[~~the~~] said code information receiving [~~means~~] portion [~~are~~] is operable to receive from the base station a plurality of items of code information corresponding respectively to a plurality of such interfering signals, each such item identifying a spreading code assigned by the network to its corresponding interfering signal; and

[~~the~~] said interfering signal processing [~~means~~] portion [~~are~~] is operable to employ the spreading codes identified by the received items to reduce the interference effect on the derived wanted signal of each of the interfering signals of [~~the~~] said plurality.

3. (ONCE AMENDED) A mobile station as claimed in claim 1 [~~or 2~~], wherein [~~the~~] said input signal of the

wanted signal processing [~~means~~] portion is pre-processed by the interfering signal processing [~~means~~] portion to reduce or cancel components in the input signal associated with the or each said interfering signal.

4. (ONCE AMENDED) A mobile station as claimed in claim 3, wherein [~~the~~] said interfering signal processing [~~means~~] portion [~~are~~] is operable to derive, for the or each said interfering signal, a corresponding interference cancellation signal representative of a component in [~~the~~] said input signal associated with that interfering signal.

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5. (ONCE AMENDED) A mobile station as claimed in claim 4, wherein [~~the~~] said interfering signal processing [~~means~~] portion [~~are~~] is operable to subtract the or each said interference cancellation signal from a signal representing the received CDMA transmission signal to produce [~~the~~] said input signal of the wanted signal processing [~~means~~] portion.

6. (ONCE AMENDED) A mobile station as claimed in claim 4 [~~or 5~~], wherein [~~the~~] said interfering signal processing [~~means~~] portion [~~are~~] is operable to derive the or each said corresponding interference cancellation signal from a signal representing [~~the~~] said received CDMA transmission signal.

7. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 4 [~~to 6~~], wherein [~~the~~] said interfering signal processing [~~means~~] portion has, for the or each said interfering signal, a corresponding processing unit for deriving [~~the~~] said interference cancellation signal corresponding to that interfering signal, which processing unit [~~includes~~] comprises:

a code generator [~~means for~~] which [~~generating~~] generates the identified spreading code assigned to [~~the~~] said interfering signal;

a [~~despreading means~~] despreader connected for

receiving a first signal representing the received CDMA transmission signal and also connected to [~~the~~] said code generator for receiving the generated spreading code, and operable to despread that signal to produce a second signal representing [~~the~~] said interfering signal; and

a [~~respreading means~~] respreader connected to [~~the~~] said [~~despreading means~~] despreader for receiving therefrom said second signal and also connected to [~~the~~] said code generator [~~means~~] for receiving the generated spreading code, and operable to respread [~~the~~] said second signal to produce [~~the~~] said corresponding interference cancellation signal.

8. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 4 [~~to 7~~], wherein [~~the~~] said interfering signal processing [~~means~~] portion further [~~include~~] comprises:

a signal delay [~~means~~] element connected for receiving a basic signal representing [~~the~~] said received CDMA transmission signal and operable to delay that basic signal by a preselected delay time to produce a delayed version thereof, [~~the~~] said input signal of the or each said processing unit being provided directly by, or being derived from, [~~the~~] said basic signal; and

a [~~subtraction means~~] subtractor connected for receiving [~~the~~] said delayed version of [~~the~~] said basic signal and the or each said interference cancellation signal, and operable to produce [~~the~~] said input signal of [~~the~~] said wanted signal processing [~~means~~] portion in dependence upon the difference between [~~the~~] said delayed version and the or each interference cancellation signal.

9. (ONCE AMENDED) A mobile station as claimed in [~~any preceding~~] claim 1, wherein one or both of [~~the~~] said wanted signal processing [~~means~~] portion and [~~the~~] said

interfering signal processing [~~means~~] portion comprise(s) a RAKE receiver having a plurality of fingers for processing different respective paths of the received CDMA transmission signal.

10. (ONCE AMENDED) A mobile station as claimed in claim 9, wherein each of [~~the~~] said wanted signal processing [~~means~~] portion and [~~the~~] said interfering signal processing [~~means~~] portion comprises such a RAKE receiver, and [~~the~~] said mobile station further comprises:

a path searcher [~~means~~] connected to [~~the~~] said wanted signal processing [~~means~~] portion and to [~~the~~] said interfering signal processing [~~means~~] portion for supplying the same path information thereto; and

a path information delay [~~means~~] element connected between [~~the~~] said path searcher [~~means~~] and [~~the~~] said wanted signal processing [~~means~~] portion for delaying supply of the path information to the wanted signal processing [~~means~~] portion for a preselected delay time after the same path information is supplied to [~~the~~] said interfering signal processing [~~means~~] portion.

11. (ONCE AMENDED) A mobile station as claimed in [~~any preceding~~] claim 1, wherein [~~the~~] said code information receiving [~~means~~] portion [~~are~~] is operable to receive [~~the~~] said code information via a common control channel broadcast by the base station to all mobile stations in its area.

12. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 1 [~~to 10~~], wherein [~~the~~] said code information receiving [~~means~~] portion [~~are~~] is operable to receive [~~the~~] said code information via a control channel associated individually with the mobile station.

13. (ONCE AMENDED) A mobile station as claimed in [~~any preceding~~] claim 1, wherein [~~the~~] said base station is operable to form respective beams for directing its

CDMA transmission signals towards their respective users and is also operable to transmit to [~~the~~] said mobile station interference judgement information providing, for each of a plurality of users operating in its area, information relevant to assessing an interference effect on the wanted signal of [~~the~~] said mobile station of an interfering signal of the user concerned;

[~~the~~] said mobile station comprising:

an interfering signal assessment [~~means for~~] portion which assessing [~~the~~] said interference effect of the interfering signal of each user of [~~the~~] said plurality based on the received interference judgement information; and

an interfering signal selection [~~means for~~] portion which selecting one or more of the interfering signals from amongst the respective interfering signals of the users of [~~the~~] said plurality based on the results of the assessment.

14. (ONCE AMENDED) A mobile station as claimed in claim 13, wherein [~~the~~] said interference judgement information for such a user of [~~the~~] said plurality includes position information of that user.

15. (ONCE AMENDED) A mobile station as claimed in claim 13 [~~or 14~~], wherein [~~the~~] said interference judgement information for such a user of [~~the~~] said plurality includes angular position information of the user relative to the base station.

16. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 13 [~~to 15~~], wherein [~~the~~] said interference judgement information for such a user of [~~the~~] said plurality includes downlink transmission power level information of that user.

17. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 13 [~~to 16~~], wherein [~~the~~] said interfering signal assessment [~~means~~] portion take

account of the position of each user of [~~the~~] said plurality relative to the position of the mobile station in assessing [~~the~~] said interference effect.

18. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 13 [~~to 17~~], wherein [~~the~~] said interfering signal assessment [~~means~~] portion include storage [~~means for~~] which storing the received interference judgement information for each user of [~~the~~] said plurality.

19. (ONCE AMENDED) A mobile station as claimed in [~~any one of claims~~] claim 13 [~~to 18~~], wherein the users of [~~the~~] said plurality are users whose downlink transmission rates exceed a predetermined threshold value.

20. (ONCE AMENDED) A base station, for use in a CDMA communications network, [~~including~~] comprising:

an interfering signal designating [~~means for~~] portion which [~~designating~~] designates at least one of a plurality of downlink signals transmitted by the base station as being an interfering signal having an interference effect on a wanted signal of a subject mobile station of the network; and

a code information transmission [~~means for~~] portion which [~~including~~] includes, in a predetermined control signal transmitted by the base station to [~~the~~] said subject mobile station, code information, identifying a spreading code assigned by the network to the designated interfering signal, for use by the subject mobile station to reduce [~~the~~] said interference effect of [~~the~~] said interfering signal on its said wanted signal.

21. (ONCE AMENDED) A base station as claimed in claim 20, wherein [~~the~~] said predetermined control signal is broadcast by the base station to all mobile stations in its area using a common control channel.

22. (ONCE AMENDED) A base station as claimed in claim

20, wherein [~~the~~] said predetermined control signal is transmitted by the base station to [~~the~~] said subject mobile station using a control channel associated individually with that mobile station.

23. (ONCE AMENDED) A base station as claimed in [~~any one of claims~~] claim 20 [~~to 22~~], further comprising:

an interfering signal assessment [~~means for~~] portion which [~~assessing~~] assesses, for each of a plurality of users operating in the area of the base station, [~~the~~] said interference effect on [~~the~~] said wanted signal of [~~the~~] said subject mobile station of the downlink signal of the user concerned; [~~the~~] said interfering signal [~~designation means~~] designating portion being operable to determine which downlink signals of the users of [~~the~~] said plurality are to be designated as such interfering signals based on the results of the assessment.

24. (ONCE AMENDED) A base station as claimed in claim 23, wherein [~~the~~] said interfering signal assessment [~~means~~] portion [~~are~~] is operable to assess [~~the~~] said interference effect in dependence upon the bit rate of the downlink signal.

25. (ONCE AMENDED) A base station as claimed in [~~any one of claims~~] claim 20 [~~to 24~~], wherein [~~the~~] said base station further [~~includes~~] comprises [~~beamforming means for~~] a beamformer which [~~forming~~] forms respective beams for directing its CDMA transmission signals towards their respective users.

26. (ONCE AMENDED) A base station as claimed in claim 25, wherein [~~the~~] said interfering signal assessment [~~means~~] portion [~~are~~] is operable to assess [~~the~~] said interfering effect in dependence upon a position of the user relative to [~~the~~] said subject mobile station.

27. (ONCE AMENDED) A base station as claimed in claim 25 [~~or 26~~], wherein [~~the~~] said interfering signal assessment [~~means~~] portion [~~are~~] is operable to assess

[~~the~~] said interference effect in dependence upon one or more of the following criteria:

an angular position of the user relative to [~~the~~] said base station;

an angular position of [~~the~~] said subject mobile station relative to the base station;

a distance of the user from the base station;

a distance of the subject mobile station from the base station;

a downlink transmission power level of the user; and

a downlink-signal bit-rate of the user.

28. (ONCE AMENDED) A base station as claimed in claim 20[~~, 21 or 22~~], further [~~including~~] comprising:

[~~beamforming means for~~] a beamformer which [~~forming~~] forms respective beams for directing its CDMA transmission signals towards their respective users;

an interference judgement information transmission [~~means for~~] portion which [~~including~~] includes, in a predetermined control signal transmitted by the base station to [~~the~~] said subject mobile station, interference judgement information providing, for each of a plurality of users operating in the area of the base station, information relevant to assessing an interference effect on [~~the~~] said wanted signal of the downlink signal of the user concerned.

29. (ONCE AMENDED) A base station as claimed in claim 28, wherein [~~the~~] said interference judgement information for such a user of [~~the~~] said plurality includes position information of that user.

30. (ONCE AMENDED) A base station as claimed in claim 28 [~~or 29~~], wherein [~~the~~] said interference judgement information for such a user of [~~the~~] said plurality includes angular position information of the user relative to the base station.

31. (ONCE AMENDED) A base station as claimed in [~~any~~

~~one of claims~~] claim 28 [~~to 30~~], wherein [~~the~~] said interference judgement information for such a user of [~~the~~] said plurality includes downlink transmission power level information of that user.

32. (ONCE AMENDED) A CDMA communications network [~~including~~] comprising:

a mobile station; and

a base station operable to designate at least one of a plurality of downlink signals transmitted thereby as being an interfering signal having an interference effect on a wanted signal of [~~the~~] said mobile station, and also operable to include, in a predetermined control signal transmitted thereby to [~~the~~] said mobile station, code information identifying a spreading code assigned by the network to the designated interfering signal;

the mobile station being operable to receive [~~the~~] said predetermined control signal and to employ [~~the~~] said spreading code identified by the code information included in that signal to reduce [~~the~~] said interference effect of that interfering signal on [~~the~~] said wanted signal.

33. (ONCE AMENDED) A receiving method, for use in a mobile station of a CDMA communications network, [~~including~~] comprising [~~the steps of~~]:

receiving a CDMA transmission signal from a base station of the network;

processing an input signal representing the received CDMA transmission signal to derive therefrom a wanted signal embodying a preselected spreading code;

receiving from the base station code information identifying a further spreading code assigned by the network to an interfering signal of another network user; and

employing the further spreading code identified by the received code information to reduce the

interference effect of that interfering signal on the derived wanted signal.

34. (ONCE AMENDED) A transmission method, for use in a base station of a CDMA communications network, [~~including~~] comprising [~~the steps of~~]:

designating at least one of a plurality of downlink signals transmitted by the base station as being an interfering signal having an interference effect on a wanted signal of a subject mobile station of the network; and

including, in a predetermined control signal transmitted by the base station to the subject mobile station, code information, identifying a spreading code assigned by the network to the designated interfering signal, for use by the mobile station to reduce [~~the~~] said interference effect of [~~the~~] said interfering signal on its said wanted signal.

35. (ONCE AMENDED) A CDMA communications method, [~~including~~] comprising [~~the steps of~~]:

designating at least one of a plurality of downlink signals transmitted by a base station of the network as being an interfering signal having an interference effect on a wanted signal of a subject mobile station of the network;

including, in a predetermined control signal transmitted by the base station to the subject mobile station, code information identifying a spreading code assigned by the network to the designated interfering signal;

receiving the predetermined control signal at the mobile station and employing the spreading code identified by the code information included in that signal to reduce the interference effect on the wanted signal of that interfering signal.

36. (NEW) A mobile station, for use in a CDMA communications network, comprising:

wanted signal processing means for processing an input signal, representing a CDMA transmission signal received at the mobile station from a base station of the network, to derive therefrom a wanted signal embodying a preselected spreading code;

code information receiving means for receiving from the base station code information identifying a further spreading code assigned by the network to an interfering signal of another network user; and

interfering signal processing means for employing the further spreading code identified by the received code information to reduce the interference effect of that interfering signal on the derived wanted signal.

37. (NEW) A base station, for use in a CDMA communications network, comprising:

interfering signal designating means for designating at least one of a plurality of downlink signals transmitted by the base station as being an interfering signal having an interference effect on a wanted signal of a subject mobile station of the network; and

code information transmission means for including, in a predetermined control signal transmitted by the base station to said subject mobile station, code information, identifying a spreading code assigned by the network to the designated interfering signal, for use by the subject mobile station to reduce said interference effect of said interfering signal on its said wanted signal.